

ENR 1.9 AIR TRAFFIC FLOW MANAGEMENT (ATFM) AND AIRSPACE MANAGEMENT

1 GENERAL

1.1 Definitions and objectives

Air Traffic Flow Management (ATFM) is an ATM service established with the objective of contributing to a safe, orderly and expeditious flow of air traffic by ensuring that ATC capacity is utilised to the maximum extent possible, and that the traffic volume is compatible with the capacities declared by the appropriate ATS authority.

With the integration of capacity management, ATFM has developed into Air Traffic Flow and Capacity Management (ATFCM). The emphasis of ATFCM is on balancing the management of *capacity* and *demand*, planned strategically and applied tactically as a result of physical airport or airspace limitations.

ATFCM will be the primary means of ensuring flight punctuality and efficiency whilst maintaining or improving safety. In order to achieve this, more work is done in adjusting capacity to meet the demand by means of long-term and short-term rerouting. Only when no other option is available an ATFCM regulation will be introduced and a CTOT issued (slot allocation).

1.2 Air traffic flow and capacity management

ATFCM has 3 phases:

- a. **Strategic Flow Management:** Strategic Flow Management takes place seven or more days prior to the day of operation and includes research, planning and co-ordination activities.
- b. **Pre-Tactical Flow Management:** Pre-Tactical Flow Management is applied during the six days prior to the day of operation and consists of planning and co-ordination activities.
- c. **Tactical Flow Management:** Tactical Flow Management is applied on the day of the operation. This phase updates the daily plan according to the actual traffic and capacity. The management of the traffic is made through ATFCM slot allocation and/or ad-hoc re-routings.

1.3 Collaborative decision making

Collaborative Decision Making (CDM) is the process, which allows decisions to be taken by those best positioned to make them on the basis of the most comprehensive, up to date and accurate information. This will enable decisions about a particular flight to be made according to the latest information available at the time, thereby enabling the flight to be dynamically optimised to reflect near or real-time events. This CDM process is a key enabler of the ATFCM strategy allowing the sharing of all relevant information between the parties involved in making decisions and supporting a permanent dialogue between the various partners throughout all phases of flight.

1.4 Information sources and reference documentation

The general ATFM procedures which apply throughout the ICAO European Region are published in the ICAO Doc 7030, Regional Supplementary Procedures (Europe). Specific Network Manager procedures and information can be found in the Network Operations Handbook, available on the Network Operations Portal (NOP): <https://www.public.nm.eurocontrol.int/PUBPORTAL/>.

Those flow management procedures that are specific for flights departing from the Netherlands are included in section 2. For general information consult the documents above.

2 FLOW MANAGEMENT PROCEDURES FOR DEPARTING FLIGHTS IN THE NETHERLANDS

2.1 Responsibility for ATFCM measures

The Network Manager, in cooperation with Amsterdam FMP at Amsterdam ACC, is responsible for the execution of ATFCM measures within the Amsterdam FIR.

Amsterdam FMP will:

- a. act as the interface between the Network Manager and ATC by providing the Network Manager with all information on the effectiveness of ATFCM measures as experienced, to make maximum use of the available ATC capacity in the Amsterdam FIR.
- b. co-ordinate action with the Network Manager to provide the most effective ATFCM service to ATC and aircraft operators.

2.2 Addresses

Central Flow Help Desk Service ¹⁾	Network Manager addresses for ATFM messages	Amsterdam FMP ²⁾
Primary point of contact: E-help desk via Network Operations Portal (NOP) URL: https://www.public.nm.eurocontrol.int/PUBPORTAL/ Secondary point of contact: OPS Tel: + 32(0)2745 1901	AFS: EUCHZMTA SITA: BRUEA7X	Post: LVNL ACC Amsterdam P.O. Box 75200 1117 ZT Schiphol Airport Tel: + 31 (0)20 406 2195 AFS: EHAZDZX

¹⁾ Network Manager Operation Center (NMOC).

²⁾ Operational hours: H24.

2.3 Flight plans

For the impact of flow management procedures on flight plans please see ENR 1.10.

2.4 ATFCM measures

Information with respect to ATFCM measures can be obtained from Amsterdam FMP or the ARO responsible for the departure aerodrome (see ENR 1.10, paragraph 1.1.2.4). The following ATFCM measures can be distinguished:

- a. **Re-routing:** A (mandatory or advisory) diversion from the route in the original flight plan to off load capacity critical area(s).
- b. **Level capping:** A (mandatory or advisory) diversion from altitude in the original flight plan to off load capacity critical ATC sectors.
- c. **Slot allocation:** During slot allocation procedures, the departure slot is issued as a calculated take-off time (CTOT). The CTOT is a nominal time with a tolerance of -5 to +10 minutes, which is primarily intended to enable ATC to allow for aerodrome congestion problems.

The CTOT is issued not earlier than 2 hours before EOBT. The CTOT is included in a slot allocation message (SAM) or in a slot revision message (SRM), which is sent by the Network Manager to:

- the address notified in advance to the Network Manager by the aircraft operator, or;
- when the address is unknown to the Network Manager:
 1. the ARO of the aerodrome of departure and, if different;
 2. the flight plan originator.

Furthermore, ATC is informed about the issued CTOT.

If it is foreseen that, due to operators reason, the flight cannot be ready in time to comply with the CTOT, the following procedures apply (see the Network Operations Handbook, part 'ATFCM Users Manual'):

- When departing from a non-CDM airport:
 - If present clock time is still 30 minutes or more before CTOT, the aircraft operator shall issue a DLA message.
 - If present clock time is within 30 minutes before CTOT, a slot extension may be requested.
 - The aircraft operator can contact NMOC, preferably via the e-helpdesk, or Amsterdam FMP (see paragraph 2.2) for requesting a slot extension.
 - A slot extension of maximum 10 minutes will be provided if the following conditions are met:
 - The flight has not already been given a slot extension.
 - The delay is less than 20 minutes.
 - The extension does not cause an capacity overload at an airport or a control sector.
 - If a slot extension cannot be provided, the aircraft operator shall issue a DLA message.
- When departing from a CDM airport:
 - the pilot shall contact TWR for a slot extension in case start-up approval has been received. If start-up approval has not been received, an update of the TOBT is required. No slot extension will be provided if requested by the AO.
 - This slot extension of maximum 10 minutes will be provided if the following conditions are met:
 - The delay is less than 20 minutes.
 - The extension does not cause an capacity overload at an airport or a control sector.
 - If a slot extension cannot be provided, the aircraft operator shall issue a DLA message and/or update the TOBT.

2.5 Departure slot monitoring

It is the responsibility of the aircraft operators to:

- a. make arrangements to ensure receipt of any CTOT issued by the Network Manager for their flights.
- b. arrange the departure of their flights to comply with the CTOT issued or advise the Network Manager, in accordance with the Network Manager procedures, that an aircraft is unable to comply with a CTOT and obtain a revised CTOT.

The CTOT is part of the en-route clearance and will be taken into account by ATC at the departure aerodrome.

2.6 Special status flights

The STS indicator in flight plan item 18 is used to indicate the necessity for special handling. To ensure correct automatic processing, standardised abbreviations have been created. (see ENR 1.10, paragraph 3.2.8).

The decision to use a particular status indicator is the responsibility of the aircraft operator. Unauthorised use of any of these indicators with the intention of avoiding flow regulations is considered a serious breach of procedure and shall be dealt with accordingly.

To be exempted from ATFCM measures, and obtain an STS/ATFMX status, Amsterdam FMP should be contacted and the procedure in the ATFCM Users Manual chapter "ATFM Exemptions" should be followed. See ENR 1.10 section 3.2.8 for flight plan filing procedures.

Aircraft operators must be aware of the fact that the non-issuing of a CTOT on the basis of a status indicator for a flight on a filed route for which regulations are in force, will cause (additional) delay for other flights or ATC constraints on the regulated route parts.

Although no prior approval is needed, LVNL constantly reviews the flight plans of flights operated using status indicators. Aircraft operators may be requested to justify the use of a given indicator for a given flight at any time within 6 months following the operation.

2.7 Reporting Network Manager operational problems

A Network Manager operational problem is defined as a significant occurrence affecting an ATS unit, an AO, an FMP or the Network Manager, resulting from an occurrence in the provision of ATFM service, data processing and distribution function or other operational services.

A Network Manager operational problem report may be originated by an ATS unit, an aircraft operator, an FMP or the Network Manager. AOs and ATC units wishing to file a Network Manager operational problem report about an incident within the Amsterdam FIR can send the report directly to the Network Manager, or may contact Amsterdam FMP at Amsterdam ACC. In the latter case, Amsterdam FMP will collect all essential information and data and forward it to the Network Manager.

2.8 Contingency procedures in case of a failure of the Enhanced Tactical Flow Management System (ETFMS)

In case the Enhanced Tactical Flow Management System (ETFMS) fails, the ATFCM procedural contingency plan starts operating and the following procedures will be applied:

- a. Amsterdam FMP will be the co-ordinating unit.
- b. AOs and AROs shall continue to send flight plan and flight plan update messages to the IFPS.

The ATFCM procedural contingency plan operates in the following four phases:

- a. ALERT phase.
- b. ACTIVATION phase.
- c. OPERATIONAL CONTINGENCY phase.
- d. RECOVERY phase

2.8.1 ALERT phase

Having been notified of an ETFMS system failure, the Network Manager Operation Center (NMOC) at EUROCONTROL will send a pre-formatted ALERT FLASH message to FMPs, ATS units and AOs, advising them about the situation and to be prepared for the ACTIVATION phase. This message will include a Provisional Contingency plan Start Time (PCST).

2.8.2 ACTIVATION phase

If it is confirmed that the ETFMS system failure is likely to continue, the Network Manager Operation Center (NMOC) at EUROCONTROL will send a pre-formatted ACTIVATION FLASH message to FMP controllers, ATS units and AOs, ordering activation of the ATFCM procedural contingency plan. The contingency plan start time (CST) will be clearly specified in the ACTIVATION FLASH message. During the ACTIVATION phase, ATC will continue to honour those calculated take-off times (CTOT) which fall within the period up to CST.

2.8.3 OPERATIONAL CONTINGENCY phase

The OPERATIONAL CONTINGENCY phase starts at CST. Any CTOT that has been issued before and falls after CST, will be ignored. For all flights to depart from an aerodrome in the Netherlands and after CST, the AO shall request Amsterdam FMP for a "departure slot time" by means of phone.

Example: "Request slot time for ABC123, departure EHAM, destination EDDF, EOBT 1234 UTC".

When a CTOT or a departure slot time can not be met, Amsterdam FMP shall be contacted.

2.8.4 RECOVERY phase

Once the ETFMS system has been declared operational, the Network Manager Operation Center (NMOC) at EUROCONTROL will send a pre-formatted RECOVERY FLASH message to FMPs, ATS units and AOs. This message will include the ETFMS recovery time (ERT) and details about the transition to the CTOT procedure. The transition time to the CTOT procedure will normally be ERT + 1 hour. Until ERT + 1, flights will depart in accordance with the departure slot time received from Amsterdam FMP. After ERT + 1 a departure slot time received from Amsterdam FMP, will be replaced by a CTOT.

As soon as possible after receipt of a RECOVERY FLASH message, AOs should ensure that a flight plan CHG/DLA message is sent for flight plans with EOBT of ERT + 1 hour or later. This will trigger SAM/SRM for flights on regulated routes.

3 FLOW EXCLUSION FOR DESTINATION AMSTERDAM/SCHIPHOL

It is possible for aircraft operators to obtain an exclusion from ATFCM measures for aircraft with destination AMSTERDAM/Schiphol (see EHAM AD 2.22 paragraph 2.3.4). These flow exclusion procedures are subject to a service level agreement (SLA) between aircraft operator and LVNL. To obtain a SLA contact:

Post: LVNL
Procedures
P.O. Box 75200
1117 ZT Schiphol Airport
The Netherlands
Email: atmprocedureservices@lvnl.nl

